

Tomato farming in greenhouse for profit

Tomato Farming – Overview



Location:

- Somaliland

: *4 Million*



- Capital City

: *Hargeisa*



- Main Export

: *Livestock*



- Language

: *Somali, Arabic, English*



- ❖ Somaliland is a self declared independent unrecognized country in the Horn of Africa.
- ❖ On May 18, 1991, Somaliland declared itself independent from Somalia following a brutal civil war that lasted from 1988 to 1991

- Tomato (*Lycopersicon esculentum*) is one of the most widely grown vegetables in the world. Tomato has not been in cultivation in Somaliland for a very long time because of the Civil War and Somaliland separated from Somalia 1991. It is an important component of the daily diet, consumed both fresh and in paste form.
- Tomato is a rich source of vitamin A & C and is cultivated over vast area of land in the world. It has its origin from the city of Mexico where it was named as Tomatile.
- Then its cultivation started in Central America and subsequently shifted to Europe. It is popular due to its color, taste & food value. Tomato has long been processed into Ketchup in Italy, Turkey, Greece, USA and European countries. It is used in large quantity at household and restaurants in the shape of tomato juice, tomato puree and paste. These products are also gaining popularity in Ethiopia 2 hours drive from Somaliland Market.
- In Somaliland, an annual total area of Three Thousand Two Hundred hectares is reportedly is enough for its cultivation producing Demand, and about 4,096 tons at 128,000KG per hectare while it makes up about 18 % of the average daily consumption of vegetables in Somaliland homes.
- Tomato may be eaten fresh as salad or they may be pressed into pastes or purees, which are used for cooking in soups or stews and producing fruit drinks. It can also be processes into juice or ketchup. There is alternative investment opportunity to grow Tomato cultivation in many parts of Somaliland both as wet and dry season crops.



Over the pass years there has been tremendous increase in the demand in Somaliland. This is because of the shortage of the Somaliland agriculture sector.

- No modern Vegetable Greenhouse Cultivation farms in Somaliland
- Less than 50 Vegetable farms for the whole country
- Somaliland market depends on Ethiopia Farms products

Establishment of a Modern Tomato Greenhouse Farm.



Establishment of a Modern Tomato Greenhouse Farm.

United Enterprise Pvt Ltd.
Hargeisa, Somaliland
Tel: +252 634 029 244
Mahamud.askar@uegroups.com
Website :www.uegroups.com

Key Management

Mahamud Sahardid Askar:

Funding Needed: US \$250,000 thousands

USD 25% increase yearly

Revenue Forecast

Year 1: \$234,000

Year 2: \$292,500

Year 3: \$365,625

Year 4: \$457,031

Year 5: \$571,289

Profitability Forecast

Year 1: \$190,648

Year 2: \$226,885

Year 3: \$93,610

Year 4: \$272,015

Year 5: \$425,024

The purpose of this plan is to provide the information necessary to evaluate the merits of the value proposition and growth strategy of United Enterprise investment in Tomato Greenhouse farm Production. Additionally; it will serve as a guide for management by establishing goals against which performance can be measured.

The Company will demonstrate that there is a large enough market to service; United Enterprise Tomato Greenhouse Farm Production (UETG) has the effective sales and marketing strategies to establish, grow and expand the Company.

UE United Enterprise Tomato Greenhouse farm will also demonstrate that the Company has eliminated or reduced as many variables of risk as possible.

Tomato consumption by every local household kitchen and the food processing industry revolves around the availability of user friendly intermediate products like tomato paste, puree, ketchup and sauces.

1. The eating habits of most Somaliland have changed considerably with better enlightenment; they now eat more of Vegetable foods, which requires a lot of tomato, Onion, Salads, Cucumbers, Chili etc.
2. The packaging of tomato cultivation makes it easier for our client such as, Suppliers, homes and hotels
3. The nature of most of our staple foods {mostly starch and vegetable based} with its relatively heavy reliance on tomato, vegetable soups and stews.



The proposed farm would occupy a land area of fifteen (15) hectares while the civil construction, farm house and warehouse would occupy one point five (1.5) hectares. The farm would cultivate the Chibili variety of seeds which requires about three (3) weeks in the nursery for it to be ready for transplanting and sixty (60) to seventy five (75) days for the first harvest.

Tomatoes can be classified based on their growth habits;

- **Determinate Type**, – Harvested over a Short period of time
- **Semi determinate**: plants keep growing and produce fruits for more or less indefinite period of time.
- **Indeterminate types**. – Harvested over a long period of time



The Determinate type are mostly preferred for open field production with most varieties being harvested for 2 - 3 months. The indeterminate types are favorable for greenhouse tunnel production with most varieties being harvested for 6 to 8 Months. Over the years, there has been a sustained investment in greenhouse tomato production. Its popularity has been growing tremendously for both rural and urban farmers.

This is strongly attributed to the high returns attained as compared to the space requirement for these

Tomato Varieties

Low cost of investment



Open Field Pollinated Variety (OPV)

High initial cost of investment



Greenhouse Pollinated Variety (Hybrid Variety)

Tomato varieties are classified into two; Open Pollinated Variety (OPV) and Greenhouse Pollinated Variety (Hybrid varieties). Some of the recognizable varieties for greenhouses farming in Somali region include

**Nemonetta F1,
Monalisa F1,**

**Corazon F1,
Harmony F1,**

**Anna F1,
Bravo F1,**

**Tylka F1,
Samantha F1 among others**

Anna F1 for example.

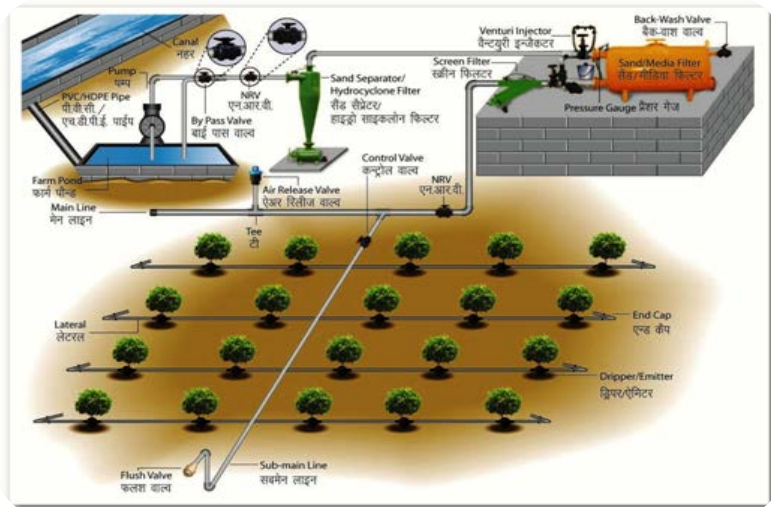
- ❖ A fresh market tomato variety performs best when grown in a greenhouse.
- ❖ Anna F1 has firm, oval shaped fruits that are deep red in color
- ❖ Resistant to Alternaria stem canker, nematodes and Fusarium wilt.
- ❖ Maturity is 75 days from transplanting.

Greenhouse technology offers a better alternative to the open field farming because of the effect of climate change and bacterial blight disease associated with open field tomato production.

The yield is approximately 74tons/acre (80- 90kg/m²) with an average of 35 kg per plant in its life span

Advantage of greenhouse farming

Investment opportunities exist in greenhouse tomato production in Somaliland. This involves the installation of hundreds of units of greenhouse facilities of 8m by 24m size per unit with drip irrigation system that creates controlled environment for all season production of high quality tomato. And other types of vegetables.



- ❖ High production per unit area of land
- ❖ Easy control of pests and diseases
- ❖ Prolonged production period
- ❖ Efficient water utilization
- ❖ Low cost of labor like spraying , watering and weeding



- ❖ High quality of crop produce
- ❖ Timely crop production matching to high market demand
- ❖ Savings on crop protection chemicals
- ❖ Less exposure to chemical toxins associated with its application

Challenges of greenhouse farming

TEMPERATURE AND HUMIDITY

Many farmers fail to get good profits from greenhouse crops because they cannot manage the two important factors that determine plant growth and productivity. Greenhouse temperatures below 13 degrees Celsius and above 30 degrees Celsius in the case of dry air or higher than 30 to 35 degrees Celsius in cases of high air humidity affect growth and productivity of most crops. The optimal temperatures for production of greenhouse tomatoes, pepper and eggplant should be 15 to 30 degrees Celsius and not beyond 35 degrees Celsius. The temperatures should be maintained at around 16 to 30 degrees Celsius during the day and 13 to 18 degrees Celsius during the night.

LACK OF QUALITY WATER SOURCES

Many parts of the country are deficient of good water sources and rivers or boreholes may also be absent. In addition, available water could be saline, chlorinated or contaminated with diseases like bacterial wilt, hence it is of poor quality.

Contaminated water is common in areas where farmers in sources of water plant crops like potatoes, tomatoes and water flowing downstream is collected by farmers for greenhouse farming. This introduces bacterial wilt in greenhouse tomato.

- ❖ **High initial cost of investment is required**
- ❖ **High level of greenhouse management skills is required**

LOSS OF SOIL FERTILITY

This is a common problem as most farmers plant one crop continuously without rotation. This can be overcome by rotating crops, for example growing onions or melons, pepper or eggplant after tomatoes and the use of both organic and inorganic fertilisers to replenish soil fertility.

Farmers can also replace greenhouse soil by bringing quality soil from outside. Adopt the technology of growing crops in pots or soilless cultures. The soils when used continuously with same crop will have a buildup of diseases, especially bacterial wilt, bacterial canker, fusarium and verticillium wilts.

Greenhouse farmers are, therefore, encouraged to treat the soil by sterilisation, solarisation or fumigation using fumigants such as Dazomet, Metam Sodium and Chloroptin.

Greenhouses get contaminated by people visiting the structures or by use of infected planting material, water and farm tools. Have a footbath at the entry.

PESTS AND DISEASE

For greenhouses that are covered with plastic, the use of ultraviolet-absorbing plastics can reduce insect problems.

Types of greenhouse units

Rigid-frame

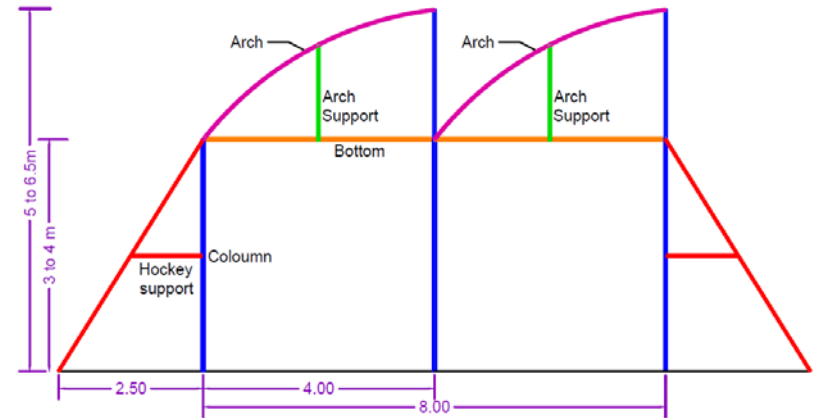
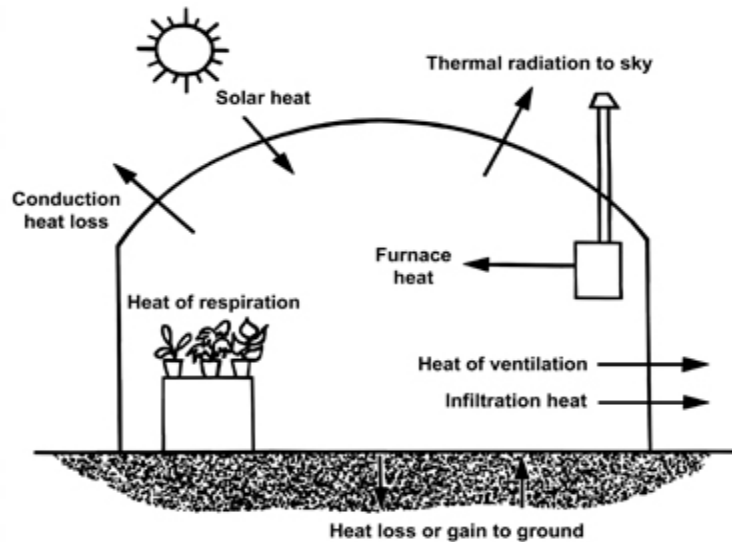
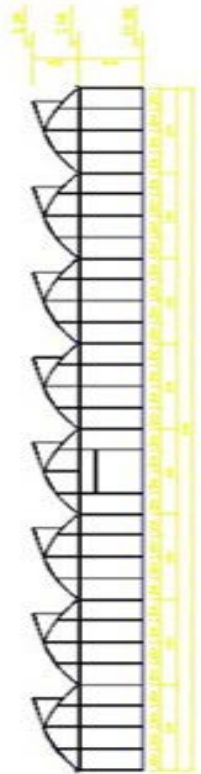
Gothic style

Post and rafter

Quonset

A-Frame

GREENHOUSE DESIGN CONSIDERATIONS



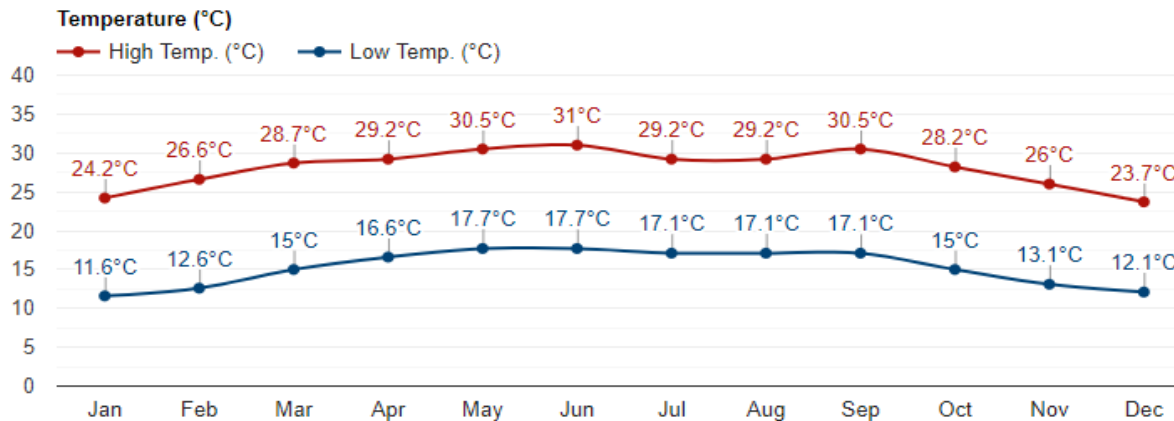
SAW TOOTH CLASSIC

In greenhouses, three considerations which are very critical to the growth and development of plants: ventilation, the amount of light that gets through to the plants and retaining the heat generated from the ground. These considerations determine the choice or type of materials used to construct a greenhouse.

- When selecting a design for your greenhouse you will consider the following:
- Accessibility to cost effective materials
- Ability to achieve optimum temperatures
- Structural stability: shape, height, length, width & wind direction
- Roof drainage- slant slope (22-28 degrees)
- Air circulation (About 10% of wall area left for side netting)
- Desired flexibility in crops to be grown
- Structure Saw –Tooth Roof Opening, Good for natural ventilation suitable for hot and rainy place.
not suitable for heavy snow place and windy.
- Covering material: PEP film or Ginger Film
Open roof can be open or covered by insect net only or by roll up & down Film.
- Ventilation: Manual or Auto Optional: Side or Roof Optional. Insect Net should be available.
- The Opening Mouth should be on reverse side of regular Wind direction.

SITE SELECTION

Average temperature Hargeisa, Somalia



Hargeisa has a semi-arid **climate** (Köppen: BSh). The city generally features warm winters and hot summers. However, despite its location in the tropics, due to the high altitude **Hargeisa** seldom experiences either very hot or very cold weather. This is a trait rarely seen in regions with a semi-arid **climates**.

An ideal Site for greenhouse farming will have the following:

- Flat to gently sloping
- Adequate natural lighting from the sun
- Close to a reliable water source
- Well-drained site
- Stable and workable soils (use planting bags where first situation is not practicable)
- Safe from strong winds
- Access to source of heat (in the temperate zones)
- Proximity to storage/processing area

Proposed Farm:

The proposed farm would occupy a land area of forty (15) hectares while the civil construction, farm house and warehouse would occupy fifteen (1.5) hectares. The farm would cultivate the Chibili variety of seeds which requires about three (3) weeks in the nursery for it to be ready for transplanting and sixty (60) to seventy five (75) days for the first harvest.

INVESTMENT FOR TOMATO IN A GREENHOUSE AND 10 HA OF OPEN FIELD FARMING

- ❖ For constructing a 10,200 Sq. meter of high-tech greenhouse for tomato production, total of \$185,973 is needed as an initial investment. This amount includes acquisition of complete set of greenhouse structures and construction of Naturally Ventilated Greenhouse for cultivating tomato, 10 hectares of open field cultivating such as:



Capsicum,



Onion,



Hot pepper



Tomato

- ❖ and open pollinated tomato including computer operated system, Automation system, irrigation components, seeds, fertilizers, crop protection, etc.; and initial cash for covering operational expenses in the first year.

Key Managements

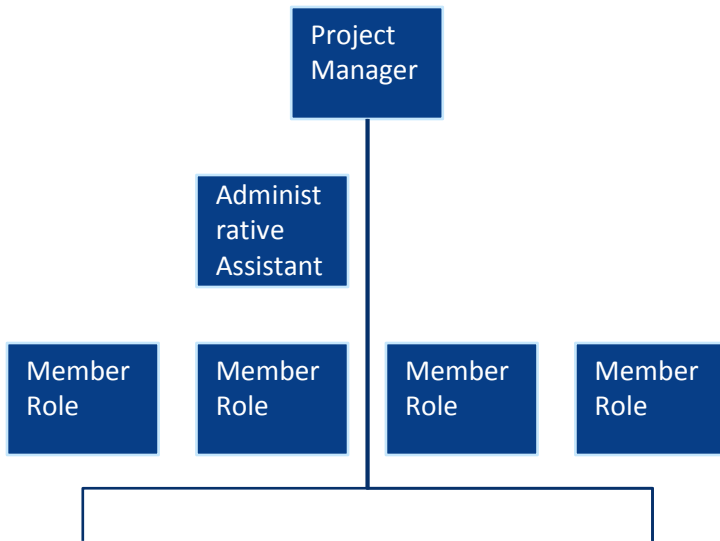
Mr. MahamudSahardeedAskar& Funder, Owner/C.E.O.

Mr. Kidan (from India)

Mr. Kidan, who is having more than ten years of experiences with Tomato Greenhouse Farm production, Tomato Greenhouse Farm farming, and Tomato Greenhouse Farm quality control with EU licensed UK based company in India as a Senior Group Quality Control Manager. He will play a very vital role from plant designing, till it's operates and continue.

Mr. Operation Manager (expert)

Mr. Operation Manager, who is having more than five years management experiences, directly with the Tomato Greenhouse Farm processing industry and networking marketing industry and other associate fields, added his broad experiences for the success of the project for the benefits of all.



Management Team

The team members' have more than ten fifteen years of managerial experiences of **this** type of business with multinational farm companies, in India. They have experience with Tomato Greenhouse farm production, quality control, and even Tomato Greenhouse Farming and post-harvest handling etc. The multi-disciplinary experiences of our team will help to successful launch and its operations, of this project.

Tomato Greenhouse farm recognizes that in any growing Company management personnel often have to fill more than one role. As a result a gap or gaps may exist until the Company is developed enough to have a specific person for every task required. Tomato Greenhouse farm currently has everything covered and feels confident that each task is being handled competently by management. As the Company hires more people the Company will always be sensitive to this issue and prevent any weaknesses by planning a contingency program that overlaps job responsibilities

Marketing Strategy

Tomato Greenhouse farm utilizes a variety of marketing methods that collectively make up the Company's marketing strategy.

Initially the Company will deal with the vegetable local market / distributors of the country, and in that case they will play very vital role in promoting our products in the local markets. The Company will offer competitive margins / commission for them. The Company can distribute quality promotion material through them, sometime even media campaigns complain. Ultimately our aim is to develop our own brand, in the vegetable industry while secure our market portion.

The Company will use social media, to promote Tomato Greenhouse Farm eating habits, educate its benefits etc. for the locals and to promote our product and brand even in the international markets. The Company will use the latest technology, internet, and online technology, wherever it is possible, for the success of our project.



Key Marketing Managements

Marketing Team

Mr. FAISAL ASKAR

Originally Somaliland nationalist, resident in UK having very good marketing exposure basically specialize with the local market, Ethiopian market as well as GCC and EU markets.

Mr. Kidan

who is having more than ten years of experiences with Agriculture products, Agriculture quality control with GCC licensed UAE based company in Sharjah as a Senior Group Quality Control Manager. He will play a very vital role from plant designing, till it's operates and continue.

Mr. Sinthia

who is having more than five years management experiences, directly with the Agriculture industry and more than ten years with Agriculture Marketing industry and other associate fields, added his broad experiences for the success of the project for the benefits of all.



Project Structure & components





NUTRI CARE™

Better Yields - Greater Profits

- ◆ **NUTRI CARE™** is extremely reliable, accurate and automated fertigation equipment ideally suitable for precision agriculture.
- ◆ **NUTRI CARE™** regulates EC and pH and delivers nutrients into the mainline through specially designed venturi pumps.
- ◆ **NUTRI CARE™** is recommended for optimal utilization of resources, for increase in yield and more profit.

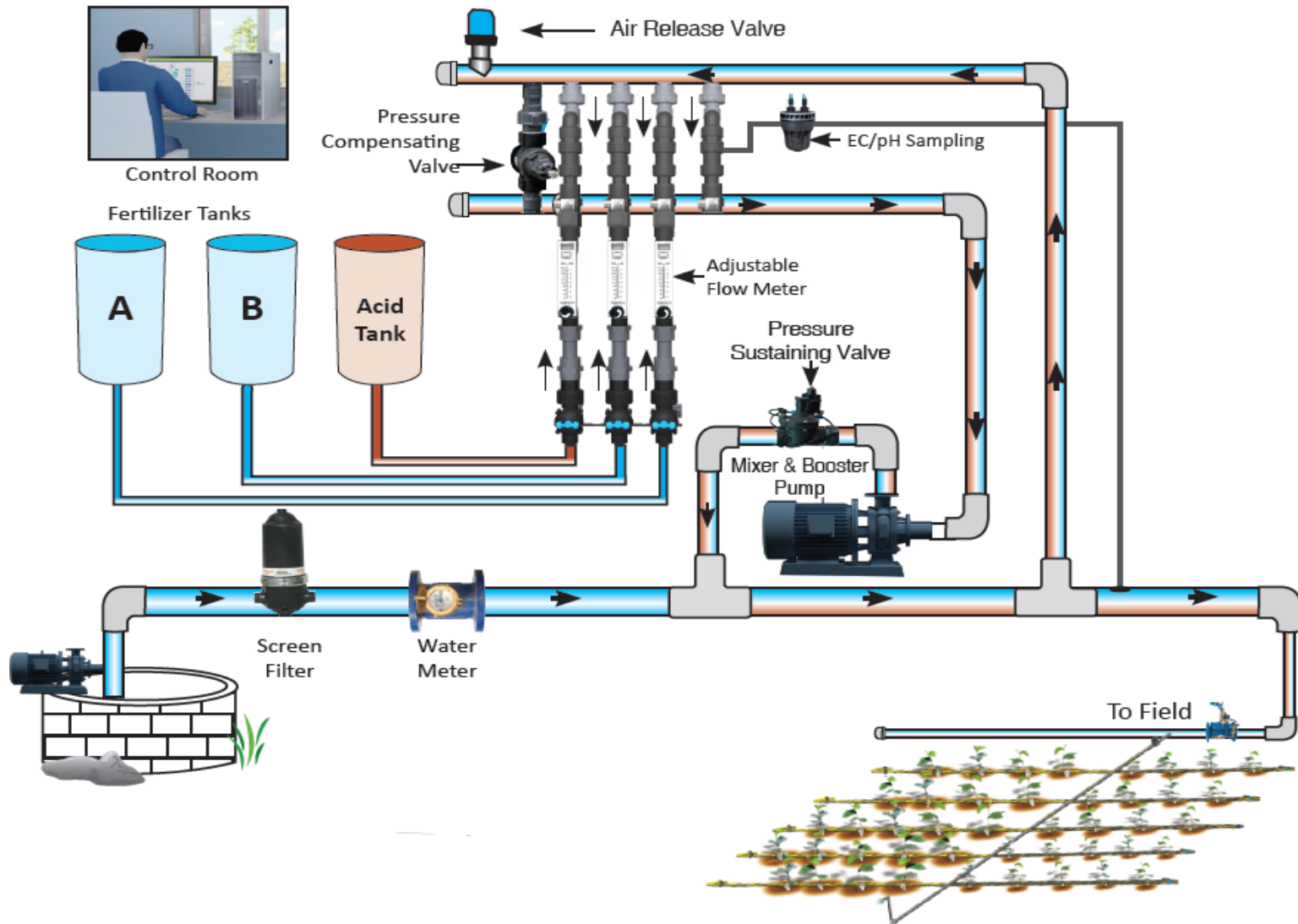
NUTRI CARE™
Better Yields - Greater Profits

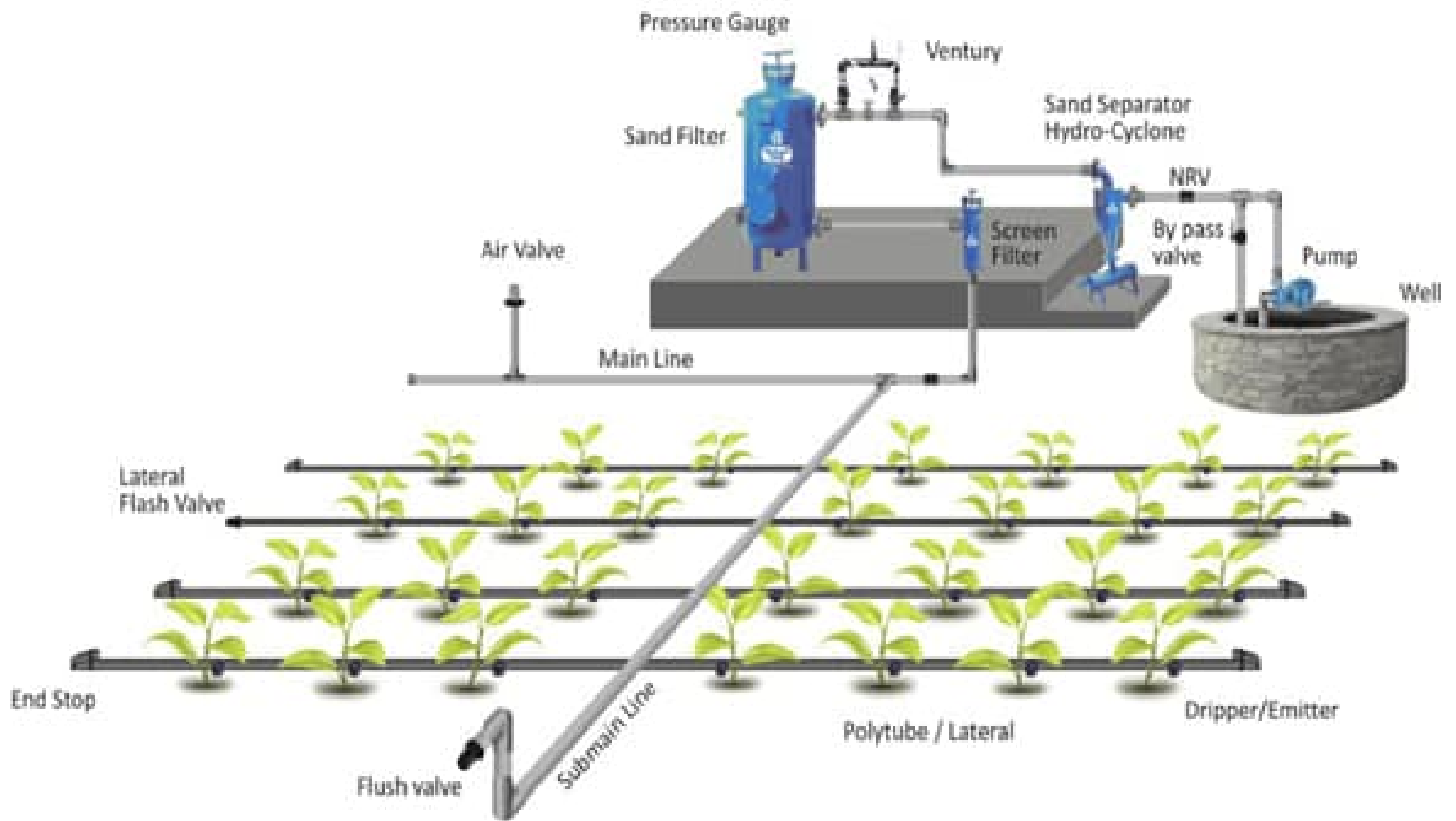
Recommended Automation for Precision Farming

Recommended Automation for Precision Farming

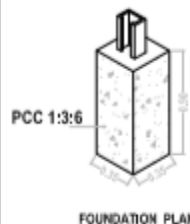
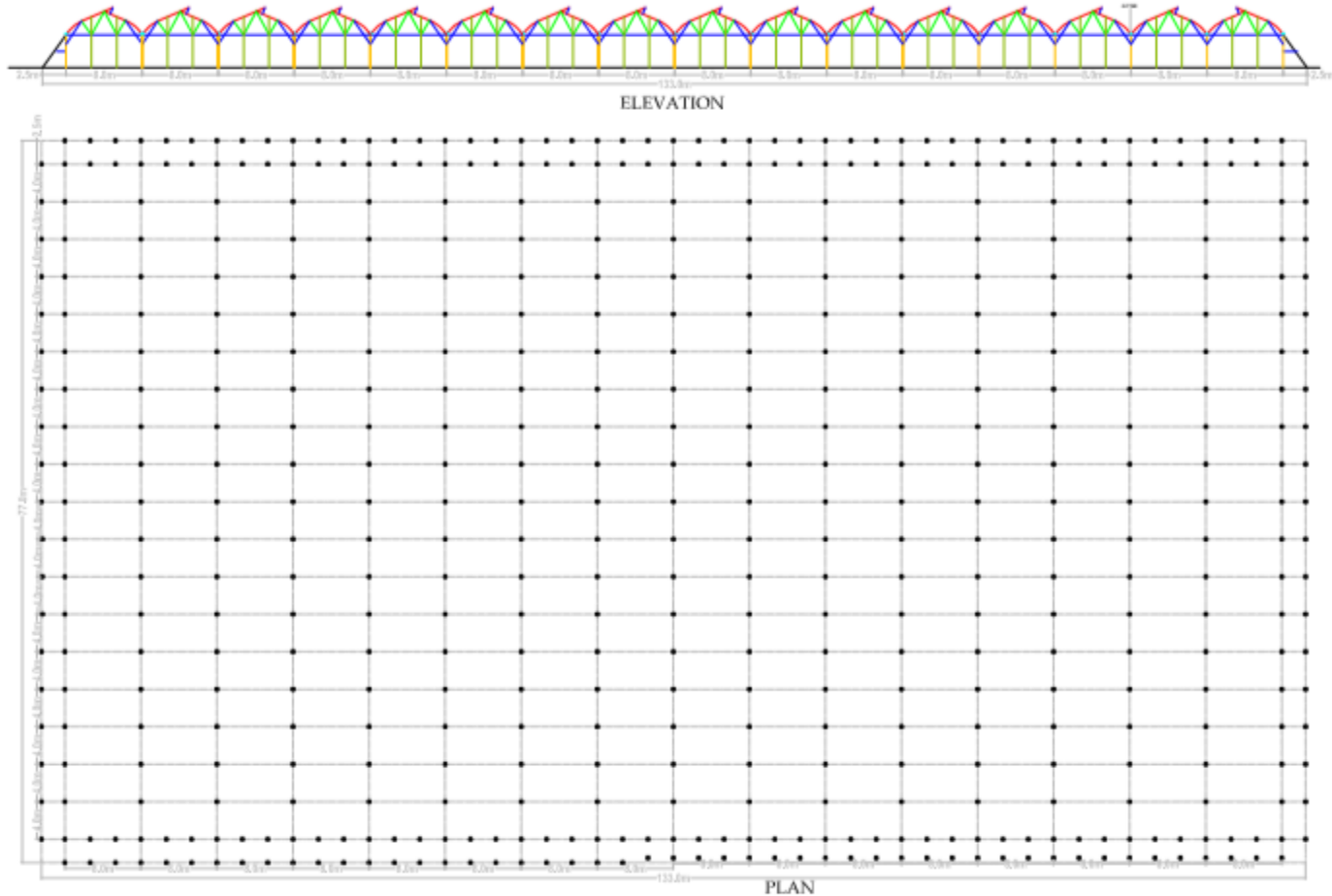



Drip Irrigation System





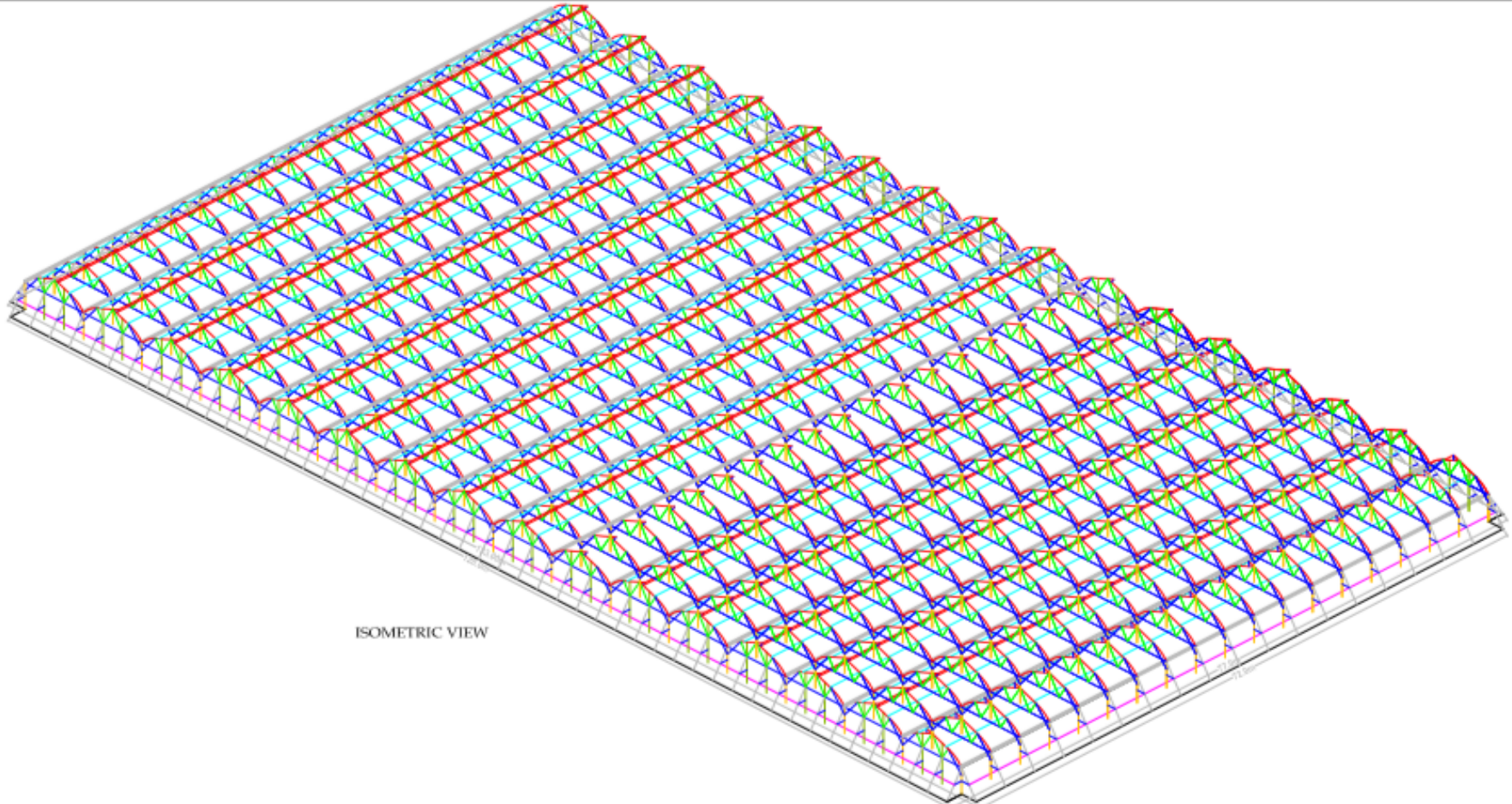
UE FARM LAYOUT: CCT-133x77





Client's Name :	Drawing Scale:	Date	Area: sqm.	Drawn By:
	NTS		10241	SAP
	System:			Design By:
	POLY HOUSE 133m X 77m			SNP
	File Location :			
				OCT



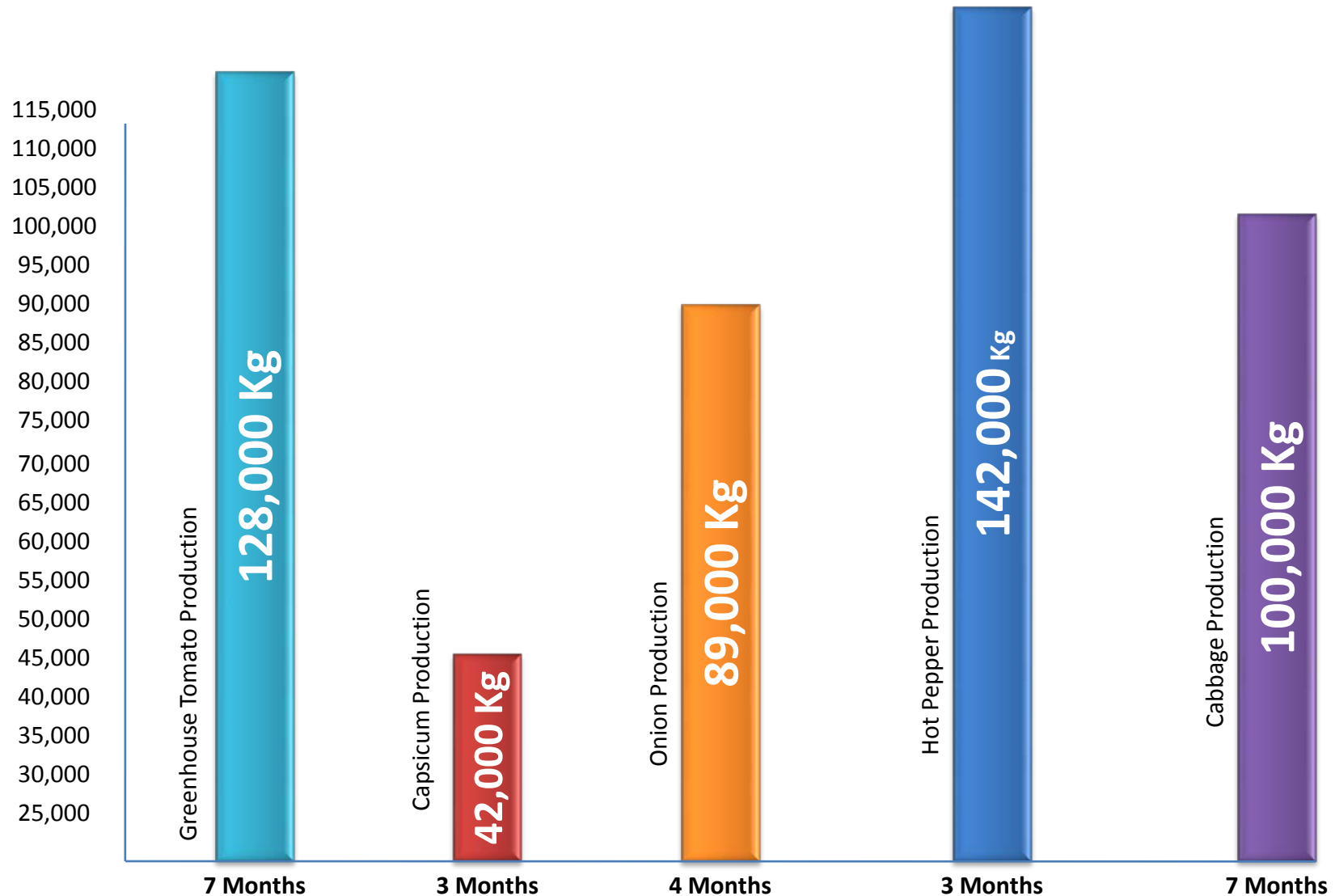
UE FARM LAYOUT: CCT – 133x77



Client's Name :		Drawing Scale:	Date	Area: sqm.	Drawn By:
 United Enterprise		NTS		10241	SAP
		System:			Design By:
		POLY HOUSE 133m X 77m			SNP
		File Location :			CCT


Jain Irrigation Systems Ltd.
Small Area Big Revolution
Jain Plastic Park, Bambhori, P.O. Box-72,
N.H.6, Jalgaon - 425 001, India
Tel: 0257 - 2258911/22, Fax: 0257-225811/122
E-Mail: jsl@jains.com, Website: www.jains.com

Total Expected Yield Per Area.



Selling price of vegetables

Projected Sales	Year 1	Year 2	Year 3
Tomato 128,000 Kg January - August	\$64,000	\$69,000	\$57,000
Capsicum 89,000kg January - April	\$53,400	\$50,000	\$47,000
Onion 2,000/50kg bag January - May	\$70,000	\$79,000	\$72,000
Hot Pepper 50,000kg January - April	\$30,000	\$25,000	\$40,000
Cabbage 100,000kg January – August	\$37,000	\$35,000	\$30,000
Total Average USD	\$254,400	\$258,000	\$246,000

Cost of productions

Description	Year 1	Year 2	Year 3
Seeding Cost	\$6,000	\$7,200	\$6,700
Fertilizer Cost	\$4,600	\$5,400	\$6,300
Weeds/Insect Control Cost	\$8,000	\$6,900	\$7,500
Pollination Cost	\$2,000	\$2,500	\$1,900
Disease Control	\$3,500	\$4,000	\$3,200
Soil analysis	\$1,000	\$1,200	\$1,400
Transportation	\$1,100	\$1,300	\$1,700
Packaging Cost	\$NA	\$NA	\$NA
Seasonal Wages Cost	\$14,000	\$15,000	\$16,000
Total Cost USD **	\$40,200	\$43,500	\$44,700

Summary of budgeted profit & Loss

Profit & Loss	Year 1	Year 2	Year 3
Total Sales (TS)	\$254,000	\$258,000	\$246,000
Cost of Goods sales (COGS)	\$40,600	\$43,860	\$45,020
Profit Before Tax	\$213,800	\$214,140	\$200,980
Tax	\$6,414	\$6,424	\$6,029
Net Profit after tax	\$207,386	\$207,715	\$194,950
Return of Investment (ROI)%	111.5%	111.7%	104.8%

Conclusion

United Enterprise investing into (Tomato Greenhouse farm) believes that its long-term prospects for establishing and continuing successful businesses are excellent.

The Company believes that this industry, and the strong foundation of experience that management brings to the Company, lends itself to positive results over the long-term. With a market-sensitive management team and excellent systems in place to monitor competitive shifts or changes, Tomato greenhouse farm is ideally positioned [1] UE to implement this business plan through the next five years [2] The farm to become a respected and recognized leader in the industry and [3] to continue growing on through the next decade.

Management seeks a relationship with a lender/investor that can help United Enterprise its Tomato greenhouse farm carefully grow the business in a manner which will allow the Company to provide exceptional products to a growing market.

The Company appreciates your consideration of this request and is confident you can enjoy a fine working relationship for many years.



Alternative Investment Opportunity in Greenhouse project in Hargeisa.

FUNDING REQUEST

PROJECT DESCRIPTION

- ❖ United Enterprise is currently seeking funding in the amount of **US \$250,000** for use in financing its initial alternative investment opportunity in Tomato Greenhouse farm startup capital requirement and general working capital requirements in the form of a loan/investment to execute its business plan for the greatest potential to secure the most desirable (“highest and best”) return from the local market alone.
- ❖ This investment and capital amount will allow the Company to have the proper and vital day-to-day cash reserves/ operating funds for the foundational first-year of operation of the UE FARM business.
- ❖ 250,000 USD for 10,200 Square Meters of Naturally Ventilated Polyhouse and drip irrigation system as a first pilot project for off-season vegetable farming that is located in Hargeisa, Maroodi Jeex Region.
- ❖ UE-Farm project will have access to fast and reliable soil testing services by Indian Company, and got the necessary soil information to purchase the correct inputs for increasing our yields. To meet this need in Somaliland, we have established and developed a professional Soil and Water Testing labs and Fertilizer management software from Jian Company,
- ❖ Now UEF project is the only biggest scaled off-season tomatoes, capsicum, onion and Hot pepper production in Somaliland.
- ❖ In seven month harvesting 125,672 Kg of tomato, 40,000 Kg of Capsicum, 12.5 tons of Onion and 16,000 kg of hot pepper are produced and sold at price of 0.7 dollars per kg in average. There is a lot of demand for fresh vegetables in the local market.
- ❖ The use of hybrid seeds provides higher yield that can lead to lower unit cost. Offseason cultivation of high value vegetables will fetch the best price and provide a consistent supply to the markets. Higher prices can be obtained by producing the right crops, at the right time and better quality. The investment in this technology lowers the chances of crop failure.

Pro Forma – 5 year Financial Forecast

Tomato Greenhouse farm' financial projections show that the Company will competently utilize the requested funding to capitalize its growth efforts. The Company projects a significant increase in net income over the next (5) years as its business plan is implemented. The Company has fully developed this financial plan to cover the next five years in business. The purpose of the financial plan is to survey solid growth through the exciting business model punctuated by a healthy relation between continually increasing revenues, and diligent monitoring of an optimum cost structure.

Start-up Summary/Use of Funds

Use of Start-up Funding	
Expenses	
Land Improvement & Developments	\$0.00
Tomato Greenhouse farm Buildings	\$,000
Cold Room & Refrigeration machinery	\$0.00
Machinery & Equipment's	\$0.00
Production fittings & fixtures	\$0.00
Office furniture, fittings & equipment's	\$0.00
Quality Control fittings & equipment (Washing in Water)	\$0.00
Vehicles	\$0.00
Basket & Palatesfor Operation	\$0.00
Tomato Greenhouse Farm Farming Project (1 Hectares Land /Buildings/Machinery & Equip/Constructions Cold storages/QC/Production Fitting/ fixtures/ Vehicles/ Basket handling.	\$0.00
Lands for Cold storages and washing Processing and packaging	\$0.00
Total Start-up Expenses	\$0.00
Total Long-Term Assets	\$0

Best/Worst Case Scenario Revenue

Exit Strategy

Tomato Greenhouse farm is open to mergers, acquisitions, or selling in the future when the time is right.

Best Case Scenario (Revenue Increases by 15%)					
	Year 1	Year 2	Year 3	Year 4	Year 5
Revenue	\$269,100	\$336,375	\$420,469	\$525,586	\$656,982
Cost of Goods	\$146,949	\$183,686	\$229,607	\$287,009	\$358,762
Gross Margin	\$122,151	\$152,689	\$190,861	\$238,577	\$298,221
Gross Margin/Revenue	45.39%	45.39%	45.39%	45.39%	45.39%
Operating Expenses	\$51,392	\$57,992	\$65,619	\$74,464	\$84,765
Net Profit	\$59,285	\$85,531	\$118,505	\$159,926	\$211,951
Cash Flow	\$35,768	\$38,653	\$72,006	\$111,704	\$162,078
Cash Balance	\$35,768	\$74,421	\$146,427	\$258,131	\$420,210
Net Profit/Revenue	22.03%	25.43%	28.18%	30.43%	32.26%

Worst Case Scenario (Revenue Decreases by 15%)					
	Year 1	Year 2	Year 3	Year 4	Year 5
Revenue	\$203,478	\$254,348	\$317,935	\$397,418	\$496,773
Cost of Goods	\$111,114	\$138,893	\$173,616	\$217,020	\$271,275
Gross Margin	\$92,364	\$115,455	\$144,319	\$180,398	\$225,498
Gross Margin/Revenue	45.39%	45.39%	45.39%	45.39%	45.39%
Operating Expenses	\$51,392	\$57,992	\$65,619	\$74,464	\$84,765
Net Profit	\$29,497	\$48,297	\$71,962	\$101,748	\$139,228
Cash Flow	\$5,981	\$1,418	\$25,463	\$53,525	\$89,355
Cash Balance	\$5,981	\$7,400	\$32,863	\$86,388	\$175,744
Net Profit/Revenue	14.50%	18.99%	22.63%	25.60%	28.03%

Appendix

Project Report

Cost Estimations: 250,000

Building 1 hectare (10,000 sq ft) of Tomato Greenhouse Farming Polyhouse Structure 100x100 sq ft. Tomato Greenhouse Farming structure.

Cost Involvement for the Delivery of the above Material and equipment,: to Berbera port Somaliland

Technical Support:

Construction of 1ha of Greenhouse structure by: Govind and Jian company from India.

Will be needing One engineer and one Technician for the greenhouse for 5 weeks.

Power Requirement Minimum Requirements 220W x 1 for all the sites accept the Tomato Greenhouse Farm Farming Project, or solar panels

Construction of Cold storage.

Temperature control storage will be the tailor made solution To lower the waste of the production and increase the production.

Appendix

One cold Storage building Cost Quotations

Quotation for Building Construction

Quotation for Equipment and installations

Quotation for Technical and Engineers and man power.